

FLEX - CREATE APPLICATION

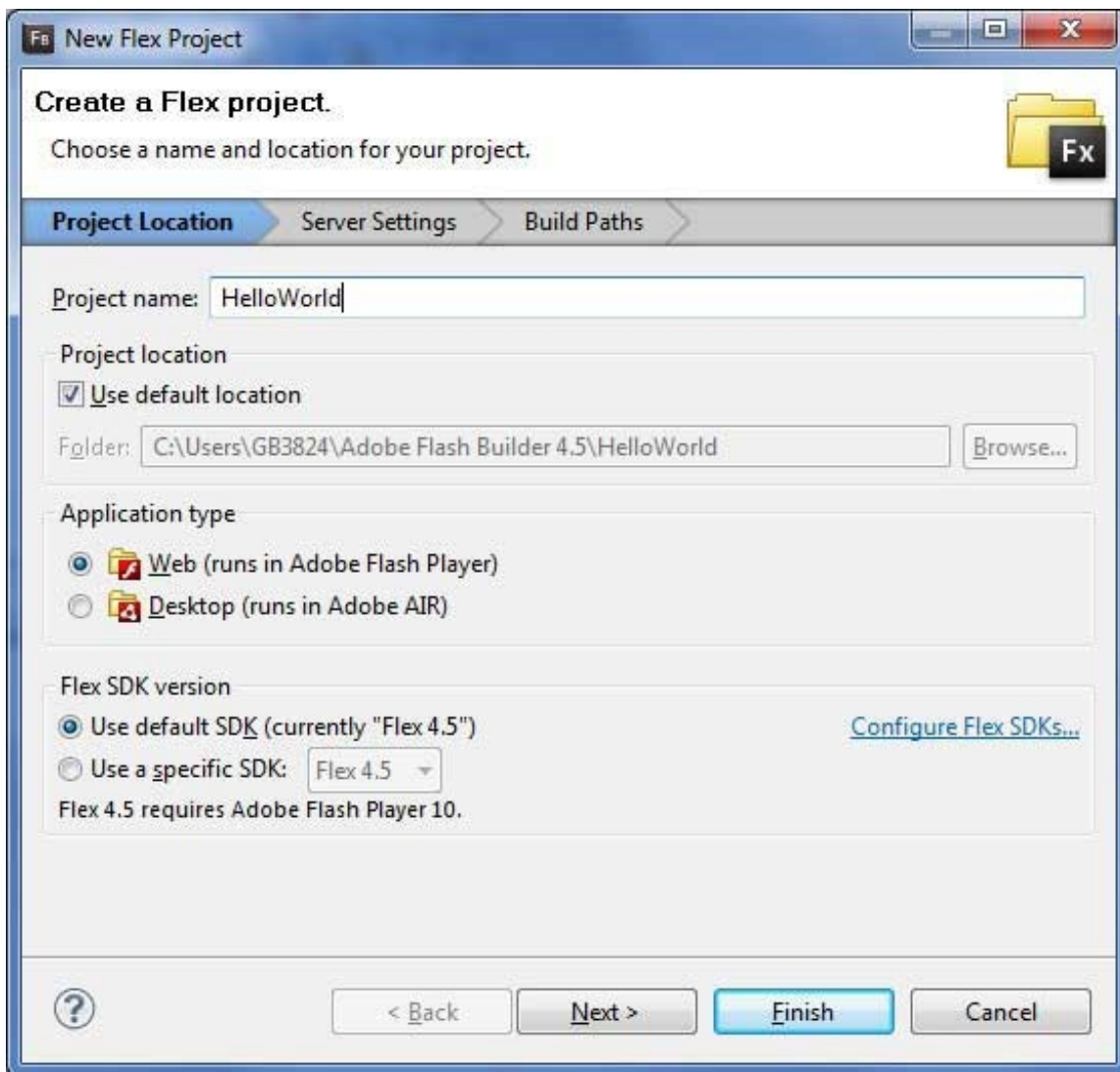
http://www.tutorialspoint.com/flex/flex_create_application.htm

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We'll use Flash Builder 4.5 to create Flex Applications. Let's start with a simple *HelloWorld* application:

Step 1 - Create Project

The first step is to create a simple Flex Project using Flash Builder IDE. Launch project wizard using the option **File > New > Flex Project**. Now name your project as *HelloWorld* using the wizard window as follows:



Select Application Type **Web (runs in Adobe Flash Player)** if not selected and leave other default values as such and click Finish Button. Once your project is created successfully, you will have following content in your Project Explorer:



Here is brief description of all important folders:

Folder	Location
src	<ul style="list-style-type: none"> • Source code (mxml / as classes) files. • We've created com/tutorialspoint/client folder structure containing the client-side specific java classes responsible for client UI display.
bin-debug	

bin-debug	<ul style="list-style-type: none"> • This is the output part, it represents the actual deployable web application. • history folder contains support files for history management of Flex application. • framework_XXX.swf, flex framework files to be used by flex application. • HelloWorld.html, wrapper/host HTML File for flex application. • HelloWorld.swf, our flex based application. • playerProductInstall.swf, flash player express installer. • spark_XXX.swf, library for spark component support. • swfobject.js, javascript responsible to load HelloWorld.swf in HelloWorld.html. It checks flash player version and passes initialization parameter to HelloWorld.swf file. • textLayout_XXX.swf, library for text component support.
html-template	<ul style="list-style-type: none"> • This represents the configurable web application. Flash Builder compiles files from html-template to bin-debug folder. • history folder contains support files for history management of Flex application. • index.template.html, wrapper/host HTML File for flex application having place holders for Flash Builder specific configuration. Gets compiled to HelloWorld.html in bin-debug folder during build. • playerProductInstall.swf, flash player express installer. Gets copied to bin-debug folder during build. • swfobject.js, javascript responsible to load HelloWorld.swf in HelloWorld.html. It checks flash player version and passes initialization parameter to HelloWorld.swf file. Gets copied to bin-debug folder during build.

Step 2 - Create external CSS file

Create a CSS file **styles.css** for Wrapper HTML page in **html-template** folder.

```
html, body {
    height:100%;
}
body {
    margin:0;
    padding:0;
    overflow:auto;
    text-align:center;
}
object:focus {
    outline:none;
}
#flashContent {
    display:none;
}

.pluginHeader {
    font-family:Arial, Helvetica, sans-serif;
    font-size:14px;
    color:#9b1204;
```

```

text-decoration:none;
font-weight:bold;
}

.pluginInstallText {
font-family:Arial, Helvetica, sans-serif;
font-size:12px;
color:#000000;
line-height:18px;
font-style:normal;
}

.pluginText {
font-family:Arial, Helvetica, sans-serif;
font-size:12px;
color:#000000;
line-height:18px;
font-style:normal;
}

```

Step 3 - Modify Wrapper HTML page template

Modify Wrapper HTML page template **index.template.html** in **html-template** folder. Flash Builder will create a default Wrapper HTML page template *html-template/index.template.html*, which will be compiled to HelloWorld.html. This file contains placeholders which Flash Builder replaces during compilation process for example flash player version, application name etc.

Let us modify this file to display custom messages if flash plugin is not installed.

```

<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Transitional//EN"
"http://www.w3.org/TR/xhtml1/DTD/xhtml1-transitional.dtd">
<html xmlns="http://www.w3.org/1999/xhtml" lang="en" xml:lang="en">
<head>
<title>${title}</title>
<meta name="google" value="notranslate" />
<meta http-equiv="Content-Type" content="text/html; charset=utf-8" />
<link rel="stylesheet" href="styles.css" type="text/css"></link>
<link rel="stylesheet" type="text/css" href="history/history.css" />
<script type="text/javascript" src="history/history.js"></script>
<script type="text/javascript" src="swfobject.js"></script>
<script type="text/javascript">
// For version detection, set to min. required Flash Player version,
//or 0 (or 0.0.0), for no version detection.
var swfVersionStr = "${version_major}.${version_minor}.${version_revision}";
// To use express install, set to playerProductInstall.swf,
//otherwise the empty string.
var xiSwfUrlStr = "${expressInstallSwf}";
var flashvars = {};
var params = {};
params.quality = "high";
params.bgcolor = "${bgcolor}";
params.allowscriptaccess = "sameDomain";
params.allowfullscreen = "true";
var attributes = {};
attributes.id = "${application}";
attributes.name = "${application}";
attributes.align = "middle";
swfobject.embedSWF(
"${swf}.swf", "flashContent",
"${width}", "${height}",
swfVersionStr, xiSwfUrlStr,
flashvars, params, attributes);
// JavaScript enabled so display the flashContent div in case
//it is not replaced with a swf object.
swfobject.createCSS("#flashContent", "display:block;text-align:left;");
</script>
</head>
<body>
<div >

```

```

<p style="margin:100px;">
<table width="700" cellpadding="10" cellspacing="2" border="0">
  <tr><td >Flash Player Required</td></tr>
  <tr><td >The Adobe Flash Player version
  10.2.0 or greater is required.</td></tr>
  <tr><td class = "pluginInstallText" align="left">
    <table border="0" width="100%">
      <tr class = "pluginInstallText" >
        <td>Click here to download and install Adobe Flash Player:</td>
        <td> </td>
        <td align="right"> <script type="text/javascript">
          var pageHost
          =((document.location.protocol == "https:") ? "https://" : "http://");
          document.write("<a target='_blank'"
          +" href='http://get.adobe.com/flashplayer/'><"
          +"img style='border-style: none' src='"
          +pageHost
          +"www.adobe.com/images/shared/download_buttons/get_flash_player.gif'"
          +" alt='Get Adobe Flash player' /></a>" );
        </script>
      </td>
    </tr>
  </table>
</td>
</tr>
</table>
</p>
</div>
<noscript>
  <object class
  width="{width}" height="{height}" >
    <param name="movie" value="{swf}.swf" />
    <param name="quality" value="high" />
    <param name="bgcolor" value="{bgcolor}" />
    <param name="allowScriptAccess" value="sameDomain" />
    <param name="allowFullScreen" value="true" />
    <!--[if !IE]>-->
    <object type="application/x-shockwave-flash" data="{swf}.swf"
    width="{width}" height="{height}">
      <param name="quality" value="high" />
      <param name="bgcolor" value="{bgcolor}" />
      <param name="allowScriptAccess" value="sameDomain" />
      <param name="allowFullScreen" value="true" />
    <!--<![endif]>-->
    <!--[if gte IE 6]>-->
  <p>
    <p style="margin:100px;">
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                = ((document.location.protocol == "https:") ? "https://" : "http://");
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                +" href='http://get.adobe.com/flashplayer/'><"
                +"img style='border-style: none' src='"
                +pageHost
                +"www.adobe.com/images/shared/download_buttons/get_flash_player.gif'"
                +" alt='Get Adobe Flash player' /></a>" );
              </script>
            </td>
          </tr>
        </table>
      </td>
    </tr>
  </table>
</p>

```

```

</p>
<!--<![endif]-->
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+"img style='border-style: none' src='"
+pageHost
+"www.adobe.com/images/shared/download_buttons/get_flash_player.gif'"
+" alt='Get Adobe Flash player' /></a>" );
</script>
</td>
</tr>
</table>
</td>
</tr>
</table>
</p>
<!--[if !IE]>-->
</object>
<!--<![endif]-->
</object>
</noscript>
</body>
</html>

```

Step 4 - Create internal CSS file

Create a CSS file **Style.css** for **HelloWorld.mxml** in **src/com/tutorialspoint** folder. Flex provides similar css styles for its UI Controls as there are css styles for HTML UI controls.

```

/* CSS file */
@namespace s "library://ns.adobe.com/flex/spark";
@namespace mx "library://ns.adobe.com/flex/mx";

.heading
{
    fontFamily: Arial, Helvetica, sans-serif;
    fontSize: 17px;
    color: #9b1204;
    textDecoration:none;
    fontWeight:normal;
}

.button {
    fontWeight: bold;
}

.container {
    cornerRadius :10;
    horizontalCenter :0;
    borderColor: #777777;
    verticalCenter:0;
    backgroundColor: #efefef;
}

```

Step 5 - Modify Entry Level Class

Flash Builder will create a default mxml file *src/com.tutorialspoint/HelloWorld.mxml*, which is having root tag `<application>` container for the application. Let us modify this file to display "Hello,World!":

```
<?xml version="1.0" encoding="utf-8"?>
<s:Application xmlns:fx="http://ns.adobe.com/mxml/2009"
    xmlns:s="library://ns.adobe.com/flex/spark"
    xmlns:mx="library://ns.adobe.com/flex/mx"
    width="100%" height="100%"
    minWidth="500" minHeight="500"
    initialize="application_initializeHandler(event)">
    <fx:Style source="/com/tutorialspoint/client/Style.css"/>
    <fx:Script>
        <![CDATA[
            import mx.controls.Alert;
            import mx.events.FlexEvent;
            protected function btnClickMe_clickHandler(event:MouseEvent):void
            {
                Alert.show("Hello World!");
            }

            protected function application_initializeHandler(event:FlexEvent):void
            {
                lblHeader.text = "My Hello World Application";
            }
        ]]>
    </fx:Script>
    <s:BorderContainer width="500" height="500"
        styleName="container">
        <s:VGroup width="100%" height="100%" gap="50" horizontalAlign="center"
            verticalAlign="middle">
            <s:Label
                styleName="heading"/>
            <s:Button label="Click Me!"
                click="btnClickMe_clickHandler(event)" styleName="button" />
        </s:VGroup>
    </s:BorderContainer>
</s:Application>
```

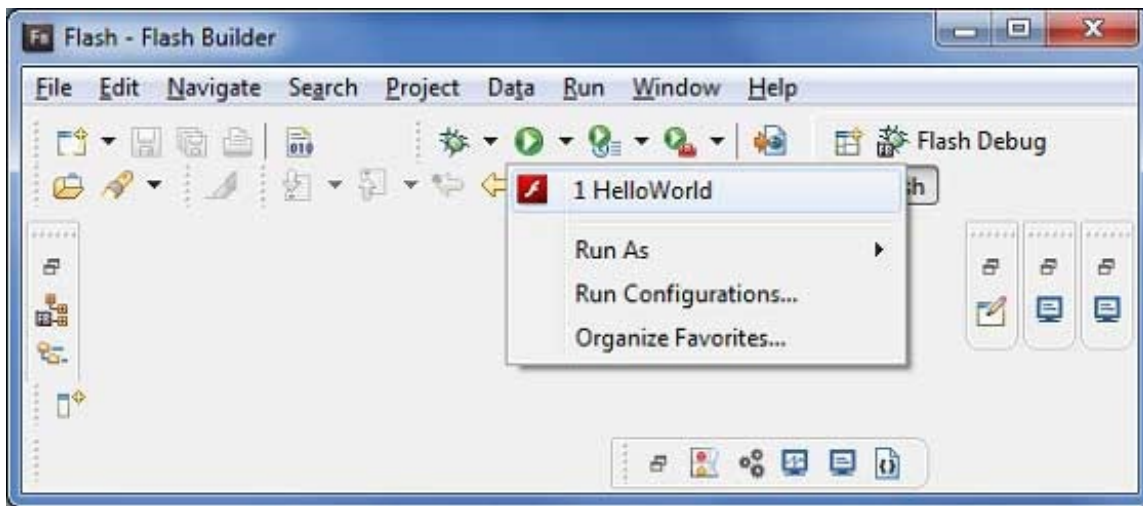
You can create more mxml or actionscript files in the same source directory to define either new applications or to define helper routines.

Step 6 - Build Application

Flash Builder has **Build Automatically** by default checked. Just check the **Problems** View if there is any error. Once you are done with the changes, you will not see any errors.

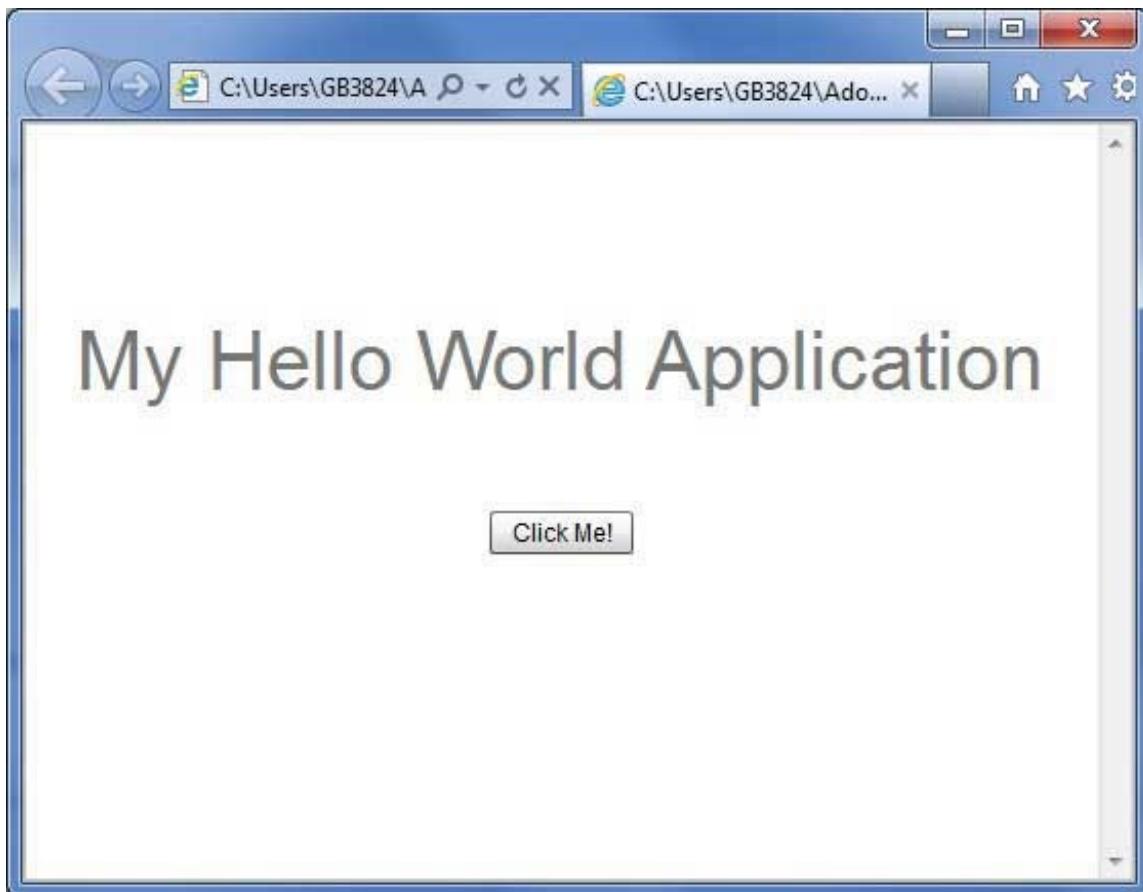
Step 7 - Run Application

Now click on **Run** application menu and select **HelloWorld** application to run the application.



If everything is fine, you must see browser pop up and application up and running. If everything is fine with your application, this will produce following result: [[Try it online](#)]

Because you are running your application in flash player, so you will need to install Flash Player plugin for your browser. Simply follow the onscreen instructions to install the plugin. If you already have Flash Player plugin set for your browser, then you should be able to see the following output:



Congratulations! you have implemented your first application using Flex.